

WHAT IS CLAIMED IS:

1 1. For use in a mobile telecommunications network comprising
2 a mobile switching center, a plurality of subscribers, and a
3 processing element unit, wherein said mobile switching center is
4 capable of communicating with said plurality of subscribers and
5 with said processing element unit, an apparatus for providing a
6 distributed processing element unit capable of accessing each
processing element within said processing element unit, said
apparatus comprising:

 a processing element unit controller within said mobile
switching center, said processing element unit controller capable
of embedding information within a temporary identification number
of a subscriber, wherein said information locates a processing
element within said processing element unit.

1 2. The apparatus as set forth in Claim 1 wherein said
2 temporary identification number is one of: a Temporary Mobile
3 Station Identification number, and a packet based Temporary Mobile
4 Station Identification number.

1 3. The apparatus as set forth in Claim 1 wherein said
2 processing element unit controller is capable of embedding
3 information within said temporary identification number of said
4 subscriber to locate said processing element within said processing
5 element unit by adding an address offset pointer to said temporary
6 identification number.

1 4. The apparatus as set forth in Claim 3 wherein said
temporary identification number is one of: a Temporary Mobile
Station Identification number, and a packet based Temporary Mobile
Station Identification number.

5 5. The apparatus as set forth in Claim 1 wherein said
processing element unit controller comprises:

 a controller within said mobile switching center; and
 computer software instructions operable by said controller to
5 execute within said controller one of: a message routing function
6 application, a load distribution function application, a temporary
7 identification number application, and an address information
8 embedding application.

1 6. The apparatus as set forth in Claim 1 wherein at least
2 one subscriber record is located within said processing element
3 unit.

1 7. The apparatus as set forth in Claim 6 wherein at least
2 one subscriber record is located within at least one processing
3 element within said processing element unit.

1 8. The apparatus as set forth in Claim 6 wherein at least
2 one application software program is located within said processing
3 element unit.

1 9. The apparatus as set forth in Claim 8 wherein at least
2 one application software program is located within at least one
3 processing element within said processing element unit.

1 10. The apparatus as set forth in Claim 6 wherein said mobile
2 switching station is capable of sending a workload message to said
3 at least one processing element where said subscriber record is
4 located.

1 11. The apparatus as set forth in Claim 10 wherein said
2 mobile switching center is capable of assigning a subscriber to a
3 processing element if said subscriber is new to said mobile
4 switching center.

1 12. For use in a mobile telecommunications network comprising
2 a mobile switching center, a plurality of subscribers, and a
3 processing element unit, wherein said mobile switching center is
4 capable of communicating with said plurality of subscribers and
5 with said processing element unit, a method for providing a
6 distributed processing element unit capable of accessing each
7 processing element within said processing element unit, said method
8 comprising the steps of:

9 assigning a temporary identification number to a subscriber
10 within a processing element unit controller within said mobile
11 switching center; and

12 embedding information within said temporary identification
13 number within said processing element unit controller within said
14 mobile switching center, wherein said information locates a
15 processing element within said processing element unit.

1 13. The method as set forth in Claim 12 wherein said
2 temporary identification number is one of: a Temporary Mobile
3 Station Identification number, and a packet based Temporary Mobile
4 Station Identification number.

1 14. The method as set forth in Claim 12 wherein said step of
2 embedding information within said temporary identification number
3 of said subscriber to locate said processing element within said
4 processing element unit comprises the step of:

5 adding an address pointer to said temporary identification
6 number.

1 15. The method as set forth in Claim 14 wherein said
2 temporary identification number is one of: a Temporary Mobile
3 Station Identification number, and a packet based Temporary Mobile
4 Station Identification number.

1 16. The method as set forth in Claim 12 further comprising
2 the steps of:

3 executing computer software instructions within a controller
4 within said mobile switching center to execute one of: a message
5 routing function application, a load distribution function
6 application, a temporary identification number application, and an
7 address information embedding application.

1 17. The method as set forth in Claim 12 further comprising
2 the step of locating at least one subscriber record within said
3 processing element unit.

1 18. The method as set forth in Claim 17 further comprising
2 the step of locating at least one subscriber record within at least
3 one processing element within said processing element unit.

1 19. The method as set forth in Claim 17 further comprising
2 the step of locating at least one application software program
3 within said processing element unit.

1 20. The method as set forth in Claim 19 further comprising
2 the step of locating at least one application software program
3 within at least one processing element within said processing
4 element unit.

1 21. The method as claimed in Claim 17 further comprising the
2 step of:

3 sending a workload message from said mobile switching center
4 to said at least one processing element where said subscriber
5 record is located.

1 22. The method as set forth in Claim 21 further comprising
2 the step of:

3 assigning a subscriber to a processing element if said
4 subscriber is new to said mobile switching center.

1 23. For use in a mobile telecommunications network comprising
2 a mobile switching center, a plurality of subscribers, and a
3 visitor location register, wherein said mobile switching center is
4 capable of communicating with said plurality of subscribers and
5 with said visitor location register, an apparatus for providing a
6 distributed visitor location register capable of accessing each
7 visitor location register site within said visitor location
8 register, said apparatus comprising:

9 a visitor location register controller within said mobile
10 switching center, said visitor location register controller capable
11 of embedding information within a temporary identification number
12 of a subscriber, wherein said information locates a visitor
13 location register site within said visitor location register.

14 24. The apparatus as set forth in Claim 23 wherein said
15 temporary identification number is one of: a Temporary Mobile
16 Station Identification number, and a packet based Temporary Mobile
17 Station Identification number.

1 25. The apparatus as set forth in Claim 1 wherein said
2 visitor location register controller is capable of embedding
3 information within said temporary identification number of said
4 subscriber to locate said visitor location register site within
5 said visitor location register by adding an address pointer to said
6 temporary identification number.

1 26. The apparatus as set forth in Claim 25 wherein said
temporary identification number is one of: a Temporary Mobile
Station Identification number, and a packet based Temporary Mobile
Station Identification number.

1 27. The apparatus as set forth in Claim 23 wherein said
visitor location register controller comprises:

2 a controller within said mobile switching center; and
3 computer software instructions operable by said controller to
4 execute within said controller one of: a message routing function
5 application, a load distribution function application, a temporary
6 identification number application, and an address information
7 embedding application.
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1 28. The apparatus as set forth in Claim 23 wherein at least
2 one subscriber record is located within said visitor location
3 register.

1 29. The apparatus as set forth in Claim 28 wherein at least
2 one subscriber record is located within at least one visitor
3 location register site within said visitor location register.

1 30. The apparatus as set forth in Claim 28 wherein at least
2 one application software program is located within said visitor
3 location register.

1 31. The apparatus as set forth in Claim 30 wherein at least
2 one application software program is located within at least one
3 visitor location register site within said visitor location
4 register.

1 32. The apparatus as set forth in Claim 28 wherein said
2 mobile switching station is capable of sending a workload message
3 to said at least one visitor location register site where said
4 subscriber record is located.

1 33. The apparatus as set forth in Claim 32 wherein said
2 mobile switching center is capable of assigning a subscriber to a
3 visitor location register site if said subscriber is new to said
4 mobile switching center.